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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Shih-Zheng Kuo

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EXAMINER

WORKU, NEGUSSIE

ART UNIT

PAPER NUMBER

2625

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/955,845	Applicant(s) KUO, SHIH-ZHENG	
	Examiner Negussie Worku	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 10-15 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7 and 16-19 is/are rejected.
- 7) ☒ Claim(s) 3-6, 8 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 January 0917 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). And a receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

2. Applicant's arguments see page 6 and 7, filed on September 21, 2005, with respect to the rejection(s) of claim(s) 1, 2, and 7 have been fully considered and carefully reviewed. Applicant's arguments have been found unpersuasive, and therefore, the rejection has been maintained for the reason that the claimed limitations of the claimed invention still read on the prior art used in the last office action.

However, upon further consideration the subject matter that the applicant argues has been addressed by indicting additional column and lines where the prior art still reads on the claimed limitation. Therefore, a new ground(s) of rejection is made with the same prior Takahashi et al. (USP 5,583,662), and the office action is non-final.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al. (USP 5,583,662).

With respect to claim 1, Takahashi et al. discloses method of enhancing scan resolution, see (col.10, lines 60-68) suitable for use in a scanner with an optical sensor, (scanner 101 of fig 1) wherein a range that a detecting cell of the optical sensor can detect includes a plurality of original pixels with a predetermined number, and a result of one detection by the detecting cell is called a scanned pixel, (image read by image sensor 101 of fig 1, if appears blurred to obviate the problem the IPU 103 of fig 3, perform pixel by pixel basis, see col.8, lines 40-45) the method comprising: scanning a smooth image region, (scanner 101 of fig 1 and 2, reads a document) wherein the smooth image region includes at least the original pixels with the predetermined number and has a uniform brightness, (the quantities of the light are controlled to a predetermined adequate quantity by feed back control, see col.9, lines 45-60, and (col.10, lines 10-15) to obtain a smooth image data, see (there by preventing the density read out of the document from becoming irregular, see (col.10, lines 1-5); and processing scanned images obtained by scanning a document according to the smooth image data, see (col.7, lines 40-45).

With respect to claim 2, Takahashi et al. discloses the method (as shown in fig 1), wherein the smooth image data is obtained prior to scanning the document, (scanning a document on the horizontal and main scan direction, see col.6, lines 30-35).

With respect to claim 7, Takahashi et al. discloses the method (as shown in fig 1-5), wherein the smooth image data is obtained after scanning the document, (the magnification or a processing which changes the amplification of data on the basis of the quantity of light for illumination and data level, is performed after the document is scanned by scanner 101 of fig 1 or 2, at least in the main scan direction after the, see col.8, lines 10-14).

With respect to claim 16, Takahashi teaches a method (as shown in fig 1 and 2) comprising: scanning a smooth image region with a uniform brightness, (scanner 101 of fig 1, scan document by controlling the light or brightness by light control circuitry in fig 3 and 4, see col.9, lines 45-55); obtaining a standard brightness from the smooth image region, and determining a calculated brightness for at least a portion of a second image region based at Least in part on the standard brightness, see (col.10, lines 1-7).

With respect to claim 17, Takahashi teaches the method (light control circuitry in fig 3 and 4, see col.9, lines 45-55), wherein the second image region includes at Least a portion with a non-uniform brightness see (col.10, lines 1-7).

With respect to claim 18, Takahashi teaches the method (fig 3 and 4), wherein the scanning of the smooth image region with a uniform brightness is performed prior to scanning the second image region see (col.10, lines 1-7).

With respect to claim 19, Takahashi teaches the method (fig 3 and 4), wherein the scanning of the smooth image region with a uniform brightness is performed prior to scanning the second image region see (col.10, lines 1-7).

Allowable Subject Matter

5. The following is a statement of reasons for the indication of allowable subject matter: Claims 10-15 are allowed.

With respect to claims 10-15, the prior art searched and of the record does not teach or disclose the claimed invention as follows: a method of enhancing scan resolution, suitable for use in a scanner with an optical sensor, wherein a range that a detecting cell of the optical sensor can detect includes a plurality of original pixels with a predetermined number, and a result of one detection by the detecting cell is called a scanned pixel, the method comprising: scanning a smooth image region, wherein the smooth image region includes at least the original pixels with the predetermined number and has a uniform brightness, to obtain a smooth image data; and processing scanned images obtained by scanning a document according to the smooth image data,

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further comprising: obtaining a calculated smooth brightness of the original pixels corresponding to scanned pixels of the smooth image data, and using a calculated brightness corresponding to the original pixels with the predetermine number minus one in the smooth image region as a standard to calculate the calculated brightness corresponding to original pixels of the document.

Claims objected to having Allowable Subject Matter

6. Claims 3-6, 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claims 3-6, the prior art does not teach or disclose the method, wherein processing the scanned images obtained by scanning the document further comprises: obtaining a calculated smooth brightness of the original pixels corresponding to scanned pixels of the smooth image data; and using a calculated brightness corresponding to the original pixels with the predetermined minus one in the smooth image region as a standard to calculate the calculated brightness corresponding to original pixels of the document.

With respect to claim 8 and 9 the prior art does not teach or disclose the method, wherein obtaining the scanned pixel while scanning the document comprises, obtaining a calculated smooth brightness of the corresponding original pixels from the scanned pixels of the smooth image data; and using a corresponding calculated brightness of the original pixel with the predetermined number minus one in the smooth image region as

a standard to calculate a calculated brightness corresponding to the original pixels of the document.

Remarks/response to the applicant's arguments

6. Applicant's remarks and arguments filed on September 21, 2005, in response to the Office action dated March 18, 2005 have been considered. The applicant indicated that the new independent claim 10 based on the limitation from dependent claim 3, that originally objected to having allowable subject matter, and therefore, claims 10-13 have been allowed. Claims 3-6, 8 and 9 have been still objected to having allowable subject matter would be allowable if rewritten in independent form.

With respect to claim 1, 2 and 7 applicant's arguments are not found persuasive for the reason the prior art still read on the claimed limitation as indicated in the office action indicated above.

Furthermore, Examiner dose not see the difference between the claimed limitation of claim 1, and the prior art. Applicant's arguments discussed on page 6 of last paragraph indicate that the "uniform brightness" of "image region" is not disclosed in the prior art.

Examiner respectfully disagree with applicant, because the limitation is broad enough to read on the prior art's teaching in that the image source shown on fig 3 and 4, and discussed on column 9, lines 45-55. Specifically, the quantity of light issuing from the lamp which change with ambient temperature, so that quantities of light or brightness are controlled to a predetermined adequate quantity, there by preventing the

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density/resolution read out of the document from becoming irregular see also col.10, lines 1-5.


Therefore, claims 1, 2, 7 and 16-19 are rejected for the reasons discussed above.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Negussie Worku whose telephone number is 305-5441. The examiner can normally be reached on 7am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on 703-305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Negussie Worku
11/16/05



MARK WALLERSON
PRIMARY EXAMINER